REMARKS

Claims 1, 7-31, 36-46 and 51-71 were examined and reported in the Office Action. Claims 1, 31, 46 and 57-71 are rejected. Claims 1, 7-31, 36-46 and 51-71 are canceled. New claims 72-115 are added. Claims 72-115 remain.

Applicant requests reconsideration of the application in view of the following remarks.

I. 35 U.S.C. § 103)a)

A. It is asserted in the Office Action that claims 1, 31, 46, 57-59, 62-64 and 67-69 are rejected in the Office Action under 35 U.S.C. § 103(a), as being unpatentable over the combination of U. S. Patent No. 4,641,350 issued to Bunn ("Bunn") and U.S. Patent Application No. 4,983,036 issued to Froelich ("Froelich"). Applicant has canceled claims 1, 31, 46, 57-59, 62-64 and 67-69. Therefore, the above-mentioned rejection under 35 U.S.C. § 103(a) are moot. Applicant addresses new claims 72, 97, 99, 110 and 112 in view of Bunn and Froelich.

According to MPEP §2142

> [t]o establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. (In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)).

Further, according to MPEP §2143.03, "[t]o establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. (In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)." *"All words in a claim must be*

considered in judging the patentability of that claim against the prior art." (In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970), emphasis added.)

Applicant's new claim 72 contains the limitations of

> an image database for recording a second image as a registered image; collation means for obtaining a plurality of coincidence ratios by collating a first image with the registered image, minimum coincidence ratio extraction means for obtaining a minimum coincidence ratio from the plurality of coincidence ratios obtained from said collation means; determination means for determining that the first image and the registered image are identical, if the extracted minimum coincidence ratio is smaller than a predetermined threshold value, maximum coincidence ratio extraction means (30) for obtaining a maximum coincidence ratio from coincidence ratios output from said first collation means (20, 22), and computation means (40) for obtaining a difference between the maximum coincidence ratio output from said maximum coincidence ratio extraction means (30) and the minimum coincidence ratio output from said minimum coincidence ratio extraction means (31), wherein said determination means (50) comprises determination means for determining that the first and second images are identical, if the difference output from said computation means (40) is not less than a predetermined threshold.

Applicant's new claim 97 contains the limitations of

> first collation means (20, 22) for obtaining a relationship between first and second images for each collation unit by collating the first and second images with each other; minimum coincidence ratio extraction means (31) for obtaining a minimum coincidence ratio from coincidence ratios in the relationship obtained from said first collation means; determination means (50, 51) for determining that the first and second images are identical, if the extracted coincidence ratio is smaller than a predetermined threshold; region designation means (65) for sequentially designating a plurality of collation regions predetermined as regions in which the first and second images are collated with each other, maximum coincidence ratio extraction means (30) for obtaining a maximum coincidence ratio from coincidence ratios output from said first collation means (20, 22), and computation means (40) for obtaining a difference between the maximum coincidence ratio output from said maximum coincidence ratio extraction means (30) and the minimum coincidence ratio output from said minimum coincidence

ratio extraction means (31), wherein said determination means (50) comprises determination means for determining that the first and second images are identical, if the difference output from said computation means (40) is not less than a predetermined threshold, and said first collation means obtains coincidence ratios by sequentially collating the first and second images within the collation regions designated by said region designation means (65).

Applicant's new claim 99 contains the limitations of

recording a second image as a registered image; collating a first image with the registered image to obtain a plurality of coincidence ratios ; extracting a minimum coincidence ratio from the plurality of coincidence ratios obtained from collating; determining that the first image and a registered image are identical if the extracted minimum coincidence ratio is smaller than a predetermined threshold value, extracting a maximum coincidence ratio from coincidence ratios output in the collating, determining a difference between the maximum coincidence ratio and the minimum coincidence ratio, and determining that the first and second images are identical if the difference between the maximum coincidence ratio and the minimum coincidence ratio is not less than the predetermined threshold.

Applicant's new claim 110 contains the limitations of

a first collating to obtain a relationship between a first image and a second image by collating the first image and the second image with each other; extracting a minimum coincidence ratio by obtaining the minimum coincidence ratio from coincidence ratios in the relationship obtained in the first collating; determining that the first and second images are identical if the extracted coincidence ratio is smaller than a predetermined threshold; and sequentially designating a plurality of collation regions predetermined as regions in which the first and second images are collated with each other, obtaining a maximum coincidence ratio from coincidence ratios output in the first collating, and obtaining a difference between the maximum coincidence ratio and the minimum coincidence ratio, wherein coincidence ratios are obtained by sequentially collating the first and second images within the collation regions.

Applicant's new claim 112 contains the limitations of

> [a] recording medium storing image collation program instructions for causing a computer to execute: recording a second image as a registered image; collating a first image with the registered image to obtain a plurality of coincidence ratios; extracting a minimum coincidence ratio from the plurality of coincidence ratios obtained from collating; and determining that the first image and a registered image are identical if the extracted minimum coincidence ratio is smaller than a predetermined threshold value extraction a maximum coincidence ratio from coincidence ratios from the plurality of coincidence ratios, determining a difference between the maximum coincidence ratio and the minimum coincidence ratio, wherein the first and second images are identical if the difference between the maximum coincidence ratio and the minimum coincidence ratio is not less than the predetermined threshold.

Bunn discloses a fingerprint identification system where new data is compared with reference data. The new data and the reference data are stored in arrays. The arrays are compared by dividing the reference array into sub-arrays and comparing the elements of each sub-array with the elements of a number of sub-arrays of the new data array.

Froelich discloses an identification system including an exemplar fingerprint on an identification card that is compared using autocorrelation with a fingerprint of the presenter of the card. Waveforms generated during autocorrelation are compared with similar waveforms taken at the time the card is issued and recorded in a read only memory within the card.

Applicant's new claims obtain both of the maximum coincidence ratio and the minimum coincidence ratio, uses the ratios (compares the difference with the threshold value), and determines whether or not two images are identical. Neither Bunn, Froelich, nor the combination of the two teach, disclose or suggest the limitations contained in Applicant's new claim 72 of

> computation means (40) for obtaining a difference between the maximum coincidence ratio output from said maximum coincidence ratio extraction means (30) and the minimum coincidence ratio output from said minimum coincidence

ratio extraction means (31), wherein said determination means (50) comprises determination means for determining that the first and second images are identical, if the difference output from said computation means (40) is not less than a predetermined threshold

new claim 97 of

maximum coincidence ratio extraction means (30) for obtaining a maximum coincidence ratio from coincidence ratios output from said first collation means (20, 22), and computation means (40) for obtaining a difference between the maximum coincidence ratio output from said maximum coincidence ratio extraction means (30) and the minimum coincidence ratio output from said minimum coincidence ratio extraction means (31), wherein said determination means (50) comprises determination means for determining that the first and second images are identical, if the difference output from said computation means (40) is not less than a predetermined threshold, and said first collation means obtains coincidence ratios by sequentially collating the first and second images within the collation regions designated by said region designation means (65)

new claim 99 of

extracting a maximum coincidence ratio from coincidence ratios output in the collating, determining a difference between the maximum coincidence ratio and the minimum coincidence ratio, and determining that the first and second images are identical if the difference between the maximum coincidence ratio and the minimum coincidence ratio is not less than the predetermined threshold

new claim 110 of

extracting a minimum coincidence ratio by obtaining the minimum coincidence ratio from coincidence ratios in the relationship obtained in the first collating; ... obtaining a maximum coincidence ratio from coincidence ratios output in the first collating, and obtaining a difference between the maximum coincidence ratio and the minimum coincidence ratio, wherein coincidence ratios are obtained by sequentially collating the first and second images within the collation regions,

nor new claim 112 of

extracting a minimum coincidence ratio from the plurality of coincidence ratios obtained from collating; and determining that the first image and a registered image are identical if the extracted minimum coincidence ratio is smaller than a predetermined threshold value extraction a maximum coincidence ratio from coincidence ratios from the plurality of coincidence ratios, determining a difference between the maximum coincidence ratio and the minimum coincidence ratio, wherein the first and second images are identical if the difference between the maximum coincidence ratio and the minimum coincidence ratio is not less than the predetermined threshold.

Since neither Bunn, Froelich, nor the combination of the two, teach, disclose or suggest all the limitations of Applicant's new claims 72, 97, 99, 110 and 112, as listed above, Applicant's new claims 72, 97, 99, 110 and 112 are not obvious over Bunn in view of Froelich since a *prima facie* case of obviousness has not been met under MPEP §2142. Additionally, the claims that directly or indirectly depend from new claims 72, 97, 99, 110 and 112, namely claims 73-96, 98, 100-109, 111, and 113-115, respectively, would also not be obvious over Bunn in view of Froelich for the same reason.

B. It is asserted in the Office Action that claims 60, 61, 65, 66, 70 and 71 are rejected in the Office Action under 35 U.S.C. § 103(a), as being unpatentable over the combination of Bunn and Froelich and further in view of U.S. Patent 5,633,947 issued to Sibbald ("Sibbald"). Applicant has canceled claims 60, 61, 65, 66, 70 and 71. Therefore, the above-mentioned rejection under 35 U.S.C. § 103(a) is moot. Applicant addresses new claims 72, 97, 99, 110 and 112 in view of Bunn and Froelich, in further view of Sibbald.

Applicant has addressed Bunn in view of Froelich above in section I(A) regarding new claims 72, 97, 99, 110 and 112.

Sibbald discloses an autocorrelation technique for fingerprints to generate an autocorrelation pattern for statistical comparison with stored data to determine whether the image of the fingerprint under test is derived from the fingerprint represented by the stored data. Sibbald, however, does not teach, disclose or suggest the limitations contained in Applicant's new claim 72 of

computation means (40) for obtaining a difference between the maximum coincidence ratio output from said maximum coincidence ratio extraction means (30) and the minimum coincidence ratio output from said minimum coincidence ratio extraction means (31), wherein said determination means (50) comprises determination means for determining that the first and second images are identical, if the difference output from said computation means (40) is not less than a predetermined threshold

new claim 97 of

maximum coincidence ratio extraction means (30) for obtaining a maximum coincidence ratio from coincidence ratios output from said first collation means (20, 22), and computation means (40) for obtaining a difference between the maximum coincidence ratio output from said maximum coincidence ratio extraction means (30) and the minimum coincidence ratio output from said minimum coincidence ratio extraction means (31), wherein said determination means (50) comprises determination means for determining that the first and second images are identical, if the difference output from said computation means (40) is not less than a predetermined threshold, and said first collation means obtains coincidence ratios by sequentially collating the first and second images within the collation regions designated by said region designation means (65)

new claim 99 of

extracting a maximum coincidence ratio from coincidence ratios output in the collating, determining a difference between the maximum coincidence ratio and the minimum coincidence ratio, and determining that the first and second images are identical if the difference between the maximum coincidence ratio and the minimum coincidence ratio is not less than the predetermined threshold

new claim 110 of

extracting a minimum coincidence ratio by obtaining the minimum coincidence ratio from coincidence ratios in the relationship obtained in the first collating; ... obtaining a maximum coincidence ratio from coincidence ratios output in the first collating, and obtaining a difference between the maximum coincidence ratio and the minimum coincidence ratio, wherein coincidence ratios are obtained by

> sequentially collating the first and second images within the collation regions,

nor new claim 112 of

> extracting a minimum coincidence ratio from the plurality of coincidence ratios obtained from collating; and determining that the first image and a registered image are identical if the extracted minimum coincidence ratio is smaller than a predetermined threshold value extraction a maximum coincidence ratio from coincidence ratios from the plurality of coincidence ratios, determining a difference between the maximum coincidence ratio and the minimum coincidence ratio, wherein the first and second images are identical if the difference between the maximum coincidence ratio and the minimum coincidence ratio is not less than the predetermined threshold.

Since neither Bunn, Froelich, Sibbald, nor the combination of the three, teach, disclose or suggest all the limitations of Applicant's new claims 72, 97, 99, 110 and 112, as listed above, Applicant's new claims 72, 97, 99, 110 and 112 are not obvious over Bunn in view of Froelich and further in view of Sibbald since a *prima facie* case of obviousness has not been met under MPEP §2142. Additionally, the claims that directly or indirectly depend from new claims 72, 97, 99, 110 and 112, namely claims 73-96, 98, 100-109, 111, and 113-115, respectively, would also not be obvious over Bunn in view of Froelich and further in view of Sibbald for the same reason.

CONCLUSION

In view of the foregoing, it is submitted that claims 72-115, patentably define the subject invention over the cited references of record, and are in condition for allowance and such action is earnestly solicited at the earliest possible date. If the Examiner believes a telephone conference would be useful in moving the case forward, he is encouraged to contact the undersigned at (310) 207-3800.

If necessary, the Commissioner is hereby authorized in this, concurrent and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2666 for any additional fees required under 37 C.F.R. §§1.16 or 1.17, particularly, extension of time fees.

Respectfully submitted,
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Dated: September 2, 2005

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I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail with sufficient postage in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P. O. Box 1450, Alexandria, Virginia 22313-1450 on September 2, 2005.

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Jean Svoboda